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[Natural Gas](#)
[Coal](#)
[Electricity](#)
[Profile](#)
[Links](#)
[Mailing Lists](#)


[Printer-Friendly Version](#), [PDF Version](#), [PDA Version](#)

October 2000

Czech Republic

The Czech Republic is important to world energy markets because it is a significant transit center for Russian gas exports to Western Europe. In addition, with the opening of the Temelin nuclear power plant in October 2000, the Czech Republic is poised to become a major regional exporter of electricity.

Note: Information contained in this report is the best available as of October 2000 and is subject to change.



GENERAL BACKGROUND

The Czech Republic is showing signs of renewed economic growth in 2000 following three years of recession. The country's GDP, which had been in decline since 1997 following an economic boom during the mid-1990's, is forecast to rise 2.5% in 2000 and 3% in 2001. Foreign direct investment, which fueled the Czech economy in the early and mid-1990s, is on the rebound, with \$5 billion invested in 1999 and more expected in 2000.

In addition, the Czech government is beginning to address fundamental problems with the country's industrial and financial sectors that contributed to the country's recession. Following an October 1999 European Commission report which warned that the Czech Republic was lagging behind other so-called "firstwave" countries in the introduction of European Union (EU) laws and structural reforms, the opposition Civic Democrats and the ruling Social Democrats (the country's two major parties) agreed to make approval of EU legislation a priority

and to speed up the pace of reforms and the stalled privatization process.

Czech inflation is low, and exports are making a substantial contribution to growth and helping to keep the current account deficit in check. Czech exports to the EU increased by 23.5% (to \$10 billion) in the January-June period of 2000 compared to the same period last year, and the country's \$9.7 billion worth of imports in the first six months of 2000 represent an increase of 24.5% compared to the same time period last year. Overall, trade with the EU represents 70% of the Czech Republic's overall foreign trade.

Although unemployment is rising--from 3% in the mid-1990's to an estimated 9% in 2000--due to restructuring that has shut down loss-making plants and factories, the unemployment figure remains below the politically-

sensitive level of 10%. The structural reforms and economic rebound have strengthened the Czech Republic's fast-track status for membership in the EU, which is currently slated for 2003-2005.

One issue to be dealt with for the Czech Republic's accession to the EU is the need for further restructuring in the country's energy sector and the end of energy subsidies. The energy chapter was included in the accession talks between the Czech Republic and the EU in November 1999, and while the Czech Republic applied for a phase-in period that would postpone full liberalization of its electricity market until 2005 and of its gas market until 2008, the EU called on the Czech Republic to look for ways of re-evaluating its application.

The recent decision by Czech authorities to activate the controversial, Soviet-era Temelin nuclear power plant in southern Bohemia in October 2000 has led to a fierce diplomatic confrontation with neighboring Austria, which argues that the plant is unsafe, and which has threatened to delay Czech accession to the EU as a result.

OIL

The Czech Republic has very limited oil reserves, and therefore relies almost exclusively on imported oil. Domestic oil production, which is extracted by Moravske naftove doly, reached 4,000 barrels per day (bbl/d) in 1999 and is expected to hold steady in 2000.

Geocan Energy Inc., a Canadian company, and the Czech companies Unigeo a.s. and Ceska Naftarska Spolecnost s.r.o. recently signed a letter of intent to exploit the 37,000-acre Rostin Block located 130 miles southeast of Prague. The companies received a 4-year oil and gas exploration permit, and while there is no seismic or drilling commitment, there is hope that oil will be discovered because the block lies along a main gas pipeline in a proven oil and gas basin.

Czech oil consumption, which totaled 173,000 bbl/d in 1999, is projected to increase slightly in 2000 due to renewed economic growth. Oil imports are piped primarily from [Russia](#), via the Druzhba pipeline, and [Germany](#), via the Mero pipeline, which allows the land-locked Czech Republic to import crude oil from the Italian port of Trieste via the Trans-alpine pipeline network.

The Druzhba pipeline, with a capacity of 73 million barrels per year (200,000 bbl/d) to the Czech Republic, historically has been the source of the majority of the country's foreign oil. The completion of the Mero pipeline, which has the same capacity as the Druzhba, allows the Czech Republic to reduce its reliance on Russian oil. As the country continues to re-orient its economy to the West, imports of oil from Russia are declining while oil imports from the EU are rising. Overall, however, the Czech Republic's trend is toward reducing its dependence on oil imports by reducing its consumption, and high world oil prices in 2000 could temper the country's projected slight increase in oil imports.

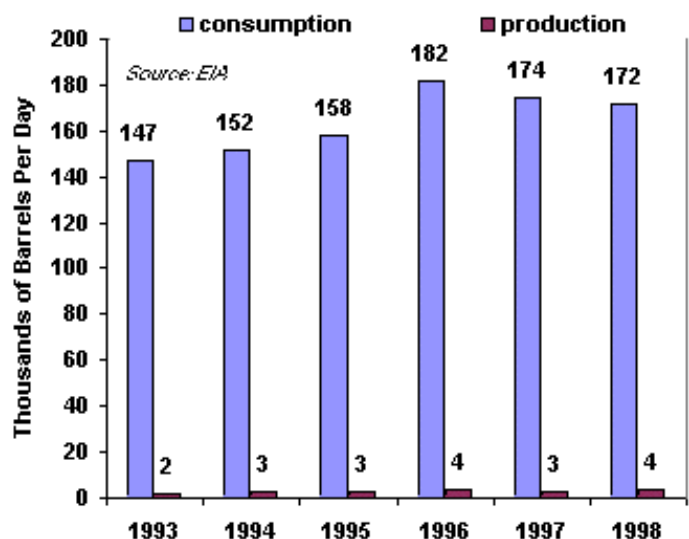
Refining

The Czech Republic has two major refineries, at Litvinov and Kralupy. The refineries, which have been privatized and are now owned and operated by Ceska Rafinerska, have a combined capacity of seven million tons per year (51 million barrels). Ceska Rafinerska has announced plans to commission a fluid catalytic cracking unit at its Litvinov refinery in 2001 with a capacity of 3,800 tons/day (27,700 bbl/d) of crude oil. The added capacity will raise the production of light products, mainly petrols and diesel oil, while the production of fuel oils, the demand for which is decreasing, will be reduced.

There also is a smaller refinery in Pardubice. It processes about 60,000 tons per year (1,200 bbl/d) of imported oil, as well as about 60,000 tons per year (1,200 bbl/d) of domestic crude.

NATURAL GAS

Czech Oil Consumption and Production, 1993-1998



As the Czech Republic strives to meet the membership criteria to join the EU, natural gas is becoming increasingly important to the country's energy mix. With the need to improve its environmental conditions, the Czech Republic is turning to cleaner-burning natural gas for its energy needs rather than coal. As a result, natural gas consumption has increased by 28% since 1993, from 259 billion cubic feet (Bcf) in 1993 to 333 Bcf in 1998.

The Czech Republic relies almost exclusively on imports for its natural gas consumption. The limited domestic gas production that does occur is carried out by a British company, Ramco Energy's Medusa Oil & Gas, near the Austrian border, while the vast majority of gas is imported from Russia. According to the Czech Statistical Office, in 1999 the Czech Republic imported approximately 78% of its natural gas from Gazexport, Russia's Gazprom subsidiary, with about 15% of its gas coming from Norway, 6% from Germany, and only about 1% from Slovakia.

Transgas, the major gas utility in the Czech Republic, is responsible for purchasing gas for Czech consumption. Although the gas industry was restructured in 1994, Transgas remains state-owned and operated. It currently sells gas to eight regional gas distribution companies, the largest of which is Jihomoravská Plynárenská in southern Moravia. In 1999, however, Transgas stopped subsidizing its gas prices in the Czech market, and internal disputes on privatization within the Czech government have been smoothed over, clearing the way for the state to divest of its gas holdings to meet EU membership criteria. While details of the Transgas sale are still in dispute, the government is seeking to complete the sale by year's end, ending Transgas' transmission monopoly. The eight gas distributors are scheduled for privatization at a later date as well.

Pipelines

With nearly 32,000 miles of gas pipelines across the country, the Czech Republic is a major transit center for Russian gas. Transgas is responsible for transporting Russian gas for export to Western Europe. Natural gas is piped to two points on the Czech-German border: Waidhaus, the main point, which delivers gas to Bavaria and points west and south; and Hora Svata Kateriny, on the border with eastern Germany, from which gas travels to Berlin and northern European destinations. The pipelines have been utilized at capacity levels since 1997.

At the beginning of November 1999, Transgas concluded with Gazexport a long-term contract for the transit of Russian natural gas across the territory of the Czech Republic until the year 2020. Until the year 2008, the contract guarantees the current volume of conveyed natural gas at the level of 28 billion cubic meters per year (91.9 Bcf). After 2009, however, the contract guarantees the conveyance of only 13 billion cubic meters (42.7 Bcf) annually. The reduction is connected with the start of the Yamal gas pipeline across Poland, which bypasses both the Czech Republic and Slovakia.

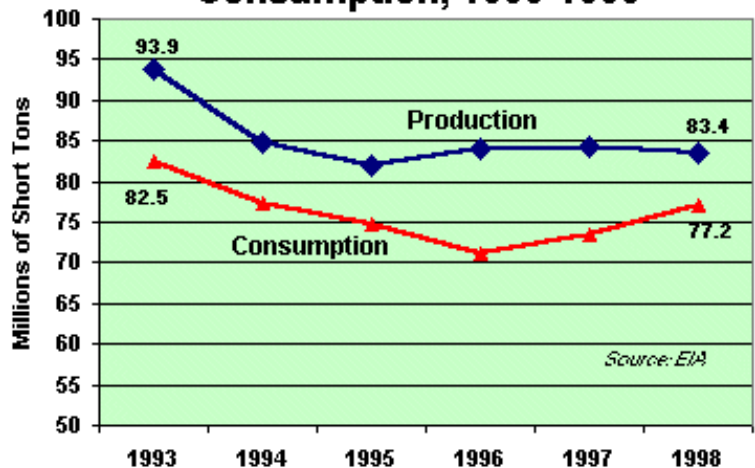
COAL

The Czech Republic's coal mining industry, which used to be one of the traditional pillars of the domestic economy, has experienced a thorough restructuring and paring down of activities in the last few years. The reasons behind this include a reduced demand for coal for electric power generation as the industry's moves away from coal-fired power plants, the use of more environment-friendly fuels (such as natural gas) in domestic industry, and competition from cheaper imported coal. Coal mining production has fallen almost by half since 1989.

A program for restructuring the Czech coal industry was approved by the government in December 1992. On the basis of this document, former state-owned coal mining companies were transformed into five large and two small commercial mining companies. In addition, the Czech government has reduced the number of inefficient mines in operation, cut the labor force associated with coal mining, and increased awareness of environmental issues related to the industry to bring the country in line with EU standards.

As a result, the production of lower-quality brown coal, used mainly by power-producing and heavy industries,

Czech Coal Production and Consumption, 1993-1998



has been reduced significantly. The launching of operations at the Temelin nuclear power plant in southern Bohemia (see nuclear section, below), probably will cause brown coal mining to fall further.

Black coal, mined in particular by the Ostravsko-karvinske doly (OKD) company in northern Moravia, has also experienced a notable decline, but the fall has been not as drastic since the amount of black coal mined in the Czech Republic is not as large as brown coal. From 1989 to 1997, black coal production in the country plummeted by 27%. In 1999, Severoceske doly Chomutov accounted for 46% of overall Czech mining production, followed by Mostecka uhelna spolecnost, with a 33% share, and Sokolovska uhelna with 21%.

The sharp reduction in coal mining over the last ten years has had a serious social impact as well. Drastic job cuts have hit black coal mining particularly hard. For example, OKD at the beginning of the 1990s employed over 100,000 people, of which only 36,000 were left in 1999. Further cuts in the mining workforce are expected.

The Czech government anticipates the closure of around 20 mines in 2000. However, with many of the most inefficient mines already closed down, total coal production is expected to decrease only moderately. The decrease in coal production in the Czech Republic has slowed in the past few years to just 11%, from 93.9 million short tons (Mmst) in 1993 to 83.4 Mmst in 1998. For economic and environmental reasons, this decline is expected to continue through the first decade of 2000.

Despite the reduction in coal production, coal remains the Czech Republic's most important fuel source, accounting for 53% of primary energy consumption in 1998. While coal consumption has decreased in conjunction with production--falling by 14% between 1993 and 1996-- consumption actually increased moderately between 1996 and 1998, rising from 71 Mmst to 77.2 Mmst. Overall, however, consumption of coal is on the decline, and the shift from coal to natural gas in the Czech energy mix will mean coal consumption will continue to fall.

ELECTRICITY

Both electricity generation and consumption generally have been rising in the Czech Republic. From 1993 to 1998, electricity production in the country rose 10.6%, from 55.6 billion kilowatt-hours (Bkwh) to 61.5 Bkwh. During the same time period, electricity consumption increased 10.3%, from 49.6 Bkwh to 54.7 Bkwh.

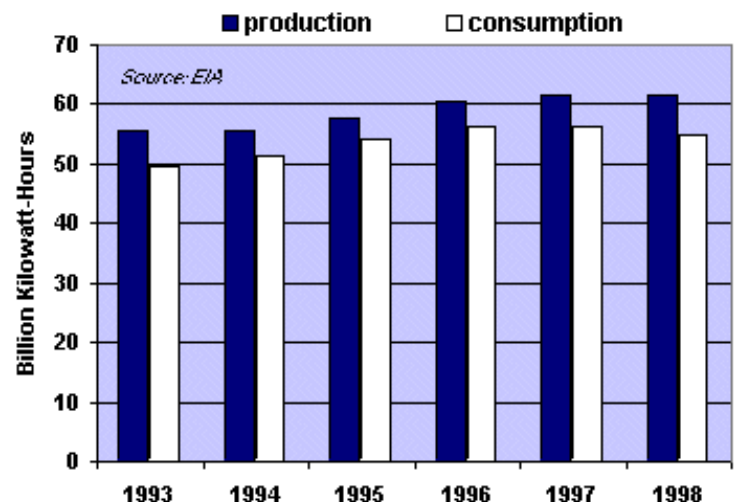
Ceske Energeticke Zavody (CEZ) is the Czech Republic's dominant electric power utilities company. The company produces over 75% of the country's electricity, operating 28 power plants, of which 10 run on fossil fuels, 13 are hydroelectric plants, two are wind power stations, two are nuclear power plants, and one is a solar power station. CEZ owns 10,700 megawatts of generation capacity in the Czech Republic, as well as the national transmission grid, which CEZ operates under control of the company's recently established, wholly-owned subsidiary Ceska Prenosova.

In an effort to liberalize its electricity sector to conform with EU standards, the Czech Republic is pushing ahead with often-delayed plans to privatize CEZ. The privatization of the company, which is 68% owned by the state, is slated for the end of 2000 while the transmission grid is to be spun off into a separate company.

In addition, the government is including in the sale its shares (which are generally in the 60% ownership range) in the regional distribution companies. Western energy groups, including U.S.-based Cinergy Corporation, already have bought large shares in many of the regional electric distributors and have been eagerly awaiting the sale of the government shares to gain majority positions.

The privatization plan also calls for the government to draw up a timetable by year-end for full deregulation of the Czech energy markets to prepare for European Union entry. Subsidies for household electricity prices are to be eliminated by the year 2002, while

Czech Electricity Production and Consumption, 1993-1998



another objective is to increase the share of renewable resources in overall electricity consumption from the current 1.5% to 3%-6% by the year 2010.

Nuclear

The Czech Republic has two operable nuclear power plants, at Dukovany and Temelin. The plant at Dukovany is equipped with four, 440-megawatt generators of the relatively new (1980s vintage) VVER-440-213 pressurized water reactor design. Dukovany provides approximately 19% of total Czech electricity.

After years of delay, the controversial Temelin nuclear power plant, located just 30 miles from the Austrian border in southern Bohemia, was cleared for operations by the Nuclear Safety Authority on October 9, 2000. Temelin director Frantisek Hezoucky announced that the first reactor will be running at about 30% capacity in two months and will become fully operational by March 2000. A second reactor is to be completed 15 months after the first one becomes operational. Energy for commercial use from the first reactor will become available in December 2000. When the plant is fully operative by 2002, it will provide some 20% of the Czech Republic's power needs.

Temelin has been controversial since construction first began in 1986. Opponents have argued that the plant is unnecessary, noting that the Czech Republic already produces more electricity than it consumes, and that additional electricity can be generated by improving the existing distribution network rather than installing new generating capacity. Critics have also accused CEZ of offering to supply energy to other countries at prices that are below production costs, a practice CEZ has publicly denied. In light of the German government's decision to gradually close down its nuclear power facilities, German energy companies are intending to import cheaper electricity from Temelin.

In addition, although CEZ has stated that Temelin meets and even exceeds EU safety standards for nuclear power plants, Czech and Austrian environmentalists who oppose the project have accused CEZ of failing to conduct adequate safety checks in order to launch Temelin in October. Ironically, one argument in favour of Temelin is an environmental one; specifically, that it will relieve the northern Czech Republic, whose aging coal-burning stations and extensive strip mines have turned the area into one of Europe's most polluted regions, of continued environmental degradation.

The Czech government is keen to privatize Temelin when it sells its shares in CEZ. According to published reports, Electricite de France is the state's preferred partner to take part in the privatization of CEZ, mainly because of its experience in operating nuclear power stations and in light of the launching of the nuclear power station in Temelin.

COUNTRY OVERVIEW

President: Vaclav Havel (since 1993; from 1989-1993, President of Czechoslovakia)

Prime Minister: Milos Zeman (since July 1998)

Independence: January 1, 1993 (from Czechoslovakia)

Population (July 2000): 10.3 million

Location/Size: Central Europe/30,387 sq. miles, slightly smaller than South Carolina

Major Cities: Prague (capital), Brno, Ostrava

Languages: Czech, Slovak

Ethnic Groups: Czech 81.2%, Moravian 13.2%, Slovak 3.1%, other 2.5%

Religions: Atheist (40%), Roman Catholic (39%), Protestant (5%), other (15%)

ECONOMIC OVERVIEW

Currency: Czech Koruna (Kc)

Market Exchange Rate (10/20/00): US\$1 = 41.3 Kc

Gross Domestic Product, GDP (1999E): \$120.8 billion; (2000E): \$124 billion

Real GDP Growth Rate (1999E): -0.5%; (2000E): 2.5%; (2001E): 3.0%

Unemployment Rate (1999E): 9.0%; (2000E): 9.0%

Inflation Rate (consumer prices, 1999E): 2.5%; (2000E): 4%

Major Trading Partners: Germany, Slovakia, Austria, Poland, France, Russia

Merchandise Exports (1999E): \$26.9 billion

Merchandise Imports (1999E): \$29 billion

Major Export Products: machinery and transport equipment, other manufactured goods, chemicals, raw materials and fuel

Major Import Products: Machinery and transport equipment, other manufactured goods, chemicals, raw materials and fuels

Total External Debt (1999E): \$24.3 billion

ENERGY OVERVIEW**Industry and Trade Minister:** Miroslav Gegr**Proven Oil Reserves (1/1/99):** 15 million barrels**Oil Production (1999E):** 4,000 barrels per day (bbl/d)**Oil Consumption (1999E):** 173,000 bbl/d**Net Oil Imports (1999E):** 168,000 bbl/d**Crude Oil Refining Capacity (1/1/00):** 186,055 bbl/d**Natural Gas Reserves (1/1/00):** 140 billion cubic feet (Bcf)**Natural Gas Production (1998E):** 10 Bcf**Natural Gas Consumption (1998E):** 333 Bcf**Recoverable Coal Reserves (1998E):** 6.8 billion short tons (42% anthracite and bituminous, 58% lignite and subbituminous)**Coal Production (1998E):** 83.4 million short tons (Mmst)**Coal Consumption (1998E):** 77.2 Mmst**Electric Generation Capacity (1998E):** 13.9 gigawatts**Electricity Generation (1998E):** 61.5 billion kilowatt-hours (Bkwh)**Electricity Consumption (1998E):** 54.7 Bkwh**ENVIRONMENTAL OVERVIEW****Minister of Environment:** Milos Kuzvart**Total Energy Consumption (1998E):** 1.8 quadrillion Btu* (0.5% of world total energy consumption)**Energy-Related Carbon Emissions (1998E):** 33.6 million metric tons (0.5% of world carbon emissions)**Per Capita Energy Consumption (1998E):** 170.2 million Btu (vs U.S. value of 350.7 million Btu)**Per Capita Carbon Emissions (1998E):** 3.3 metric tons (vs U.S. value of 5.5 metric tons)**Energy Intensity (1998E):** 56,200 Btu/\$1990 (vs U.S. value of 13,400 Btu/\$1990)****Carbon Intensity (1998E):** 1.07 metric tons/thousand \$1990 (vs U.S. value of 0.21 metric tons/thousand \$1990)****Sectoral Share of Energy Consumption (1997E):** Industrial (58.2%), Residential (19.1%), Transportation (12.9%), Commercial (9.8%)**Sectoral Share of Carbon Emissions (1997E):** Industrial (58.1%), Residential (19.4%), Transportation (13.2%), Commercial (9.3%)**Fuel Share of Energy Consumption (1998E):** Coal (53.1%), Oil (20.3%), Natural Gas (17.9%)**Fuel Share of Carbon Emissions (1998E):** Coal (68.4%), Oil (18.1%), Natural Gas (13.4%)**Renewable Energy Consumption (1997E):** 47.2 trillion Btu* (18% increase from 1996)**Number of People per Motor Vehicle (1997):** 2.7 (vs U.S. value of 1.3)**Status in Climate Change Negotiations:** Annex I country under the United Nations Framework Convention on Climate Change (ratified October 7th, 1993). Under the negotiated Kyoto Protocol (signed on November 23, 1998, but not yet ratified), the Czech Republic has agreed to reduce greenhouse gases 8% below 1990 levels by the 2008-2012 commitment period.**Major Environmental Issues:** Air and water pollution in areas of northwest Bohemia and in northern Moravia around Ostrava present health risks; acid rain damaging forests**Major International Environmental Agreements:** A party to Conventions on Air Pollution, Air Pollution-Nitrogen Oxides, Air Pollution-Sulphur 85, Air Pollution-Sulphur 94, Air Pollution-Volatile Organic Compounds, Antarctic Treaty, Biodiversity, Climate Change, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Nuclear Test Ban, Ozone Layer Protection, Ship Pollution and Wetlands. Has signed, but not ratified: Air Pollution-Persistent Organic Pollutants, Antarctic-Environmental Protocol

** The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar and wind electric power. The renewable energy consumption statistic is based on International Energy Agency (IEA) data and includes hydropower, solar, wind, tide, geothermal, solid biomass and animal products, biomass gas and liquids, industrial and municipal wastes. Sectoral shares of energy consumption and carbon emissions are also based on IEA data.*

***GDP based on EIA International Energy Annual 1998*

ENERGY INDUSTRIES**Organization:** Coal - Severoceske doly Chomutov, Mostecka uhelna spolecnost, and Sokolovska uhelna are the major companies; Natural Gas - Transgas, controls Czech gas trade, transit, and transmission sectors; Electricity - CEZ, the predominately state-owned Czech power enterprise**Major Coal Producing Areas:** Hard Coal (Bituminous): Ostrava-Karvina, Kladno basins; Brown Coal and Lignite: Severocesky and Sokolov basins**Oil and Gas Pipelines Crossing Czech Territory:** Druzhiba/Friendship (oil); Mero (oil); Adria (oil); Transit

(natural gas)

Oil Refineries: Litvinov, Kralupy, Pardubice

Nuclear Power Plants: Dukovany, Temelin

Sources for this report include: U.S. Energy Information Administration; CIA World Factbook; U.S. Department of Commerce's Central and Eastern European Business Information Center (CEEbic); Radio Free Europe/Radio Liberty; Eastern Bloc Research; WEFA.

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[U.S. State Department Country Commercial Guide FY 1999](#)

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Contact:

Lowell Feld

lowell.feld@eia.doe.gov

Phone: (202) 586-9502

Fax: (202) 586-9753

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